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Amazon EFS Update – On-Premises Access via Direct Connect

by Jeff Barr | on 20 DEC 2016 | in [Amazon EC2](#), [Amazon Elastic File System \(EFS\)](#), [AWS Direct Connect](#), [AWS Re:Invent](#) | [Permalink](#) | [Share](#)

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I introduced you to Amazon Elastic File System (Amazon EFS) last year ([Amazon Elastic File System – Shared File Storage for Amazon EC2](#)) and announced production readiness earlier this year ([Amazon Elastic File System – Production-Ready in Three Regions](#)). Since the launch earlier this year, thousands of AWS customers have used it to set up, scale, and operate shared file storage in the cloud.

Today we are making EFS even more useful with the introduction of simple and reliable on-premises access via [AWS Direct Connect](#). This has been a much-requested feature and I know that it will be useful for migration, cloudbursting, and backup. To use this feature for migration, you simply attach an EFS file system to your on-premises servers, copy your data to it, and then process it in the cloud as desired, leaving your data in AWS for the long term. For cloudbursting, you would copy on-premises data to an EFS file system, analyze it at high speed using a fleet of [Amazon Elastic Compute Cloud \(Amazon EC2\)](#) instances, and then copy the results back on-premises or visualize them in [Amazon QuickSight](#).

You'll get the same file system access semantics including strong consistency and file locking, whether you access your EFS file systems from your on-premises servers or from your EC2 instances (of course, you can do both concurrently). You will also be able to enjoy the same multi-AZ availability and durability that is part-and-parcel of EFS.

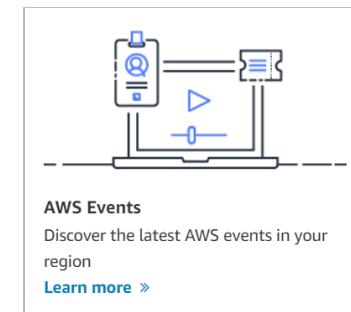
In order to take advantage of this new feature, you will need to use Direct Connect to set up a dedicated network connection between your on-premises data center and an [Amazon Virtual Private Cloud \(VPC\)](#). Then you need to make sure that your filesystems have mount targets in subnets that are reachable via the Direct Connect connection:

Availability Zone	Subnet	IP address	Security groups
<input checked="" type="checkbox"/> us-east-1a	subnet-75a56749 (default)	Automatic	sg-98fa09e5 - default
<input checked="" type="checkbox"/> us-east-1b	subnet-009a1149 (default)	Automatic	sg-98fa09e5 - default
<input checked="" type="checkbox"/> us-east-1c	subnet-b85488e3 (default)	Automatic	sg-98fa09e5 - default
<input type="checkbox"/> us-east-1d			
<input type="checkbox"/> us-east-1e			

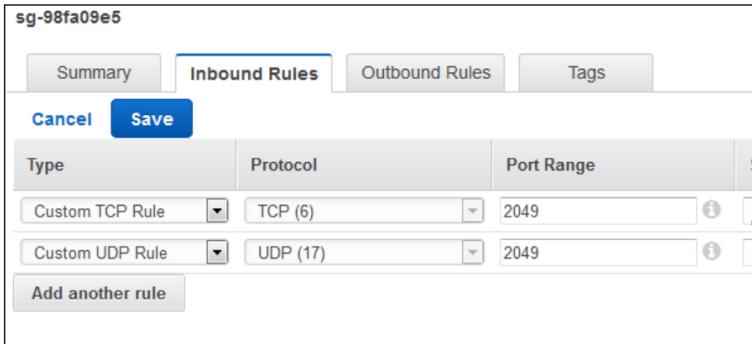
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You also need to add a rule to the mount target's security group in order to allow inbound TCP and UDP traffic to port 2049 (NFS) from your on-premises servers:



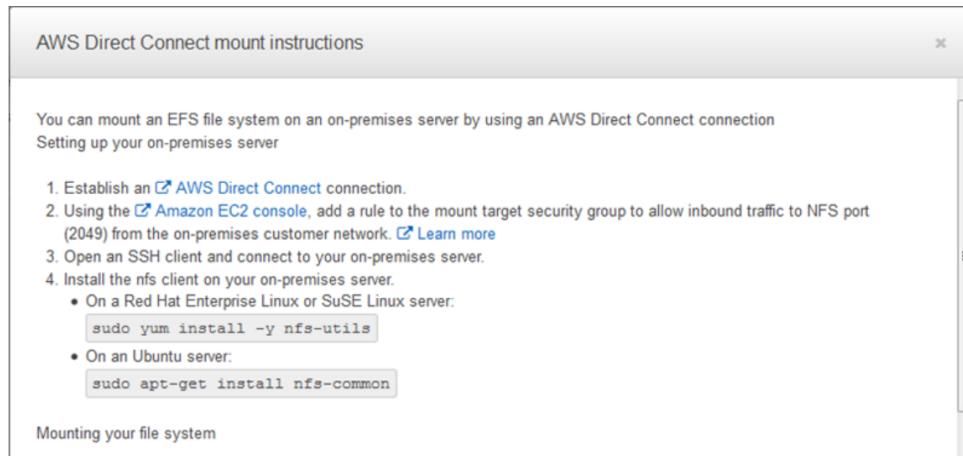
After you create the file system, you can reference the mount targets by their IP addresses, NFS-mount them on-premises, and start copying files. The IP addresses are available from within the [AWS Management Console](#):

Mount targets							
VPC	Availability Zone	Subnet	IP address	Mount target ID	Network interface ID	Security groups	Life cycle state
vpc-e68d9c81 - DefaultVPC (default)	us-east-1a	subnet-75a56749	172.31.44.183	fsmt-e82ef0a1	eni-ef69e106	sg-98fa09e5 - default	Available
	us-east-1c	subnet-b85488e3	172.31.27.88	fsmt-eb2ef0a2	eni-40faa38e	sg-98fa09e5 - default	Available
	us-east-1b	subnet-009a1149	172.31.9.69	fsmt-ed2ef0a4	eni-16677cfc	sg-98fa09e5 - default	Available

The Management Console also provides you with access to step-by-step directions! Simply click on the **On-premises mount instructions**:



And follow along:



Mounting your file system

1. Open an SSH client and connect to your on-premises server.
2. Create a new directory on your on-premises server, such as "efs".

```
• sudo mkdir efs
```

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This feature is available today at no extra charge in the US East (N. Virginia), US West (Oregon), Europe (Ireland), and US East (Ohio) Regions.

— [Jeff](#),

TAGS: AWS re:Invent

**Jeff Barr**

Jeff Barr is Chief Evangelist for AWS. He started this blog in 2004 and has been writing posts just about non-stop ever since.

**AWS Podcast**

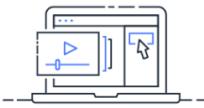
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